

**REMARKS**

Claims 1, 2 and 4-11 are pending. Claims 1 and 2 are allowed. Claim 4 is amended. The amendments do not constitute new matter and are made to more clearly set forth the claimed invention. Entry of the foregoing amendments is respectfully requested.

Of note, on Page 4 of the pending official action, there is a statement that "THIS ACTION IS MADE FINAL." However, both the Office Action Summary and PAIR indicate that this is a NON-FINAL official action. In a telephonic interview with Examiner Qian on October 10, 2006, Dr. Qian confirmed that the action is NON-FINAL.

Claims 4-11 are rejected under the written description requirement of 35 U.S.C. § 112, first paragraph. For reasons set forth below rejection of the claims should be withdrawn and all pending claims be allowed to issue.

**The Claims Comply With The Written Description Requirement**

Claims 4-11 are rejected under 35 U.S.C. §112, first paragraph.

The Examiner states that the rejections are maintained for reason of record mailed on October 31, 2005, and as discussed further in the Official Action mailed April 7, 2006. In the rejection mailed October 31, 2005, the Examiner has alleged that "[t]he specification teaches that Mda-5 is encoded by cDNA as disclosed in SEQ ID NO:1, not nucleic acid having 90% homology of SEQ ID NO:1."

In reiterating the above rejection, the Examiner states at page 3 of the Official Action mailed April 7, 2006 that:

As discussed in the previous office action, there is no support in the specification for the

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claimed nucleic acid(s) because the passages cited by Applicants (page 52, lines 6-8, and page 57, lines 21-25) are directed to Mda-5 polynucleotide and polypeptide only. The specification teaches that Mda-5 is encoded by cDNA as disclosed in SEQ ID NO: 1, not nucleic acid having 90% homology of SEQ ID NO: 1. The MPEP states: "While there is no *in haec verba* requirement, newly added claim limitations must be supported in the specification through express, implicit, or inherent disclosure."

In other words, new or amended claims which introduce elements or limitations such as a subgenus of nucleic acids having the recited function, which covers nucleic acids comprising 92% homology with SEQ ID NO: 1, and which are not supported by the as-filed disclosure as a whole, violate the written description requirement.

The Examiner contends for the foregoing reasons that the specification fails to support the nucleic acids of claim 4.

In response, Applicants assert that the subject matter encompassed by amended claim 4 is fully supported in the specification in compliance with 35 U.S.C. §112, first paragraph, and therefore the rejection should be withdrawn. Applicants respectfully disagree that new matter has been introduced due to amendments filed in the prior response.

Applicant's draw the Examiner's attention to the following excerpts of text from the specification:

- (i) page 9, lines 18-21 of the specification:

The invention provides for a nucleic acid which hybridizes to DNA shown in SEQ ID NO: 1 or the complementary strand thereof, wherein the nucleic acid or the complementary strand thereof encodes a polypeptide having Mda5 activity; and

- (ii) the paragraph bridging pages 27 and 28 of the specification:

Two DNA or polypeptide sequences are "substantially homologous" when at least about 80% (preferably at least about 90%, and most preferably at least about 95%) of the nucleotides or amino acids match over a defined length of the molecule. As used herein, NY02:563051.1

"substantially homologous" also refers to sequences showing identity to the specified DNA or polypeptide sequence. DNA sequences that are substantially homologous can be identified in a Southern hybridization experiment under, for example, stringent conditions, as defined for that particular system. Defining appropriate hybridization conditions is within the skill of the art. See, e.g., Sambrook et al., *supra*; DNA Cloning, vols I & II, *supra*; Nucleic Acid Hybridization, *supra*.

The Examiner contends that the specification refers only to Mda5 nucleic acids and proteins as defined by SEQ ID NOs: 1 and 2. The above-cited sections of the specification show that this is not the case; rather, the specification expressly provides for nucleic acid sequences that hybridize to SEQ ID NO:1 (or its complement), a subset of which would be substantially homologous sequences that hybridize under stringent conditions.

Thus the specification supports the present claims, which require both a structural and functional relationship to Mda5. The structural relationship resides in the requisite level of homology. The functional relationship required is the ability to reduce colony forming ability of particular cell line.

Applicants assert that the scope of the claims in their present form is not overreaching, as the Examiner contends, but rather fairly represents Applicants' invention. To restrict Applicants to claims covering only SEQ ID NO:1 and 2 would effectively deprive them of the benefit of their invention, as the modification of a single nucleotide or a single amino acid would place a molecule outside the scope of the claims. If, in the drafting of the specification, Applicants had not foreseen such variations, the Examiner's position could be supported, but in the case at hand, it cannot. Applicants ensured that disclosure was included that expressly provides for structurally and functionally related molecules.

Therefore, Applicants believe that claim 4 in its present form is fully supported by NY02:563051.1

the specification, so that the rejection of claim 4 and its dependent claims should be removed.

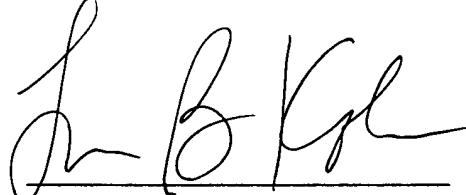
CONCLUSION

Based on the foregoing remarks, Applicants submit that the present application is in condition for allowance. A Notice of Allowance is therefore respectfully requested.

Applicants do not believe that any additional fee is required in connection with the submission of this document. However, should any fee be required, the Commissioner is hereby authorized to charge any fees to Deposit Account 02-4377. A copy of this sheet is enclosed.

Respectfully submitted,

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